PHASE ONE OF THE MARKET STUDY FOR A DATABASE COMPUTER

Z-SL
JR1
1983

INPUT

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Feb.1983

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PHASE ONE OF THE MARKET STUDY FOR
TITLE
A DATABASE COMPUTER

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PHASE ONE OF THE
MARKET STUDY FOR
A DATABASE COMPUTER

Prepared for:
SERVIO LOGIC

February 1983

INPUT

ZJRI

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I INTRODUCTION

- The objective of phase one was to determine the vendors, products, and services relevant to a study of the market potential for a database computer and to establish the areas to be researched.

- To do this, a draft questionnaire was composed (see Appendix A) in agreement with Servio Logic and was tested on three user targets, one OEM, and three vendor targets. Jean Russell was included in the discussion with the OEM prospect.

- The results were used to reorient the questionnaire (see Appendix B) and redefine the companies to be interviewed (see Appendix C). SERVIO has requested to be included in 15 of the user interviews and four of the OEM interviews. A schedule is being prepared for these.

- A final version of the questionnaire was telephoned from Jean Russell/Dennis Nickolai on Friday, February 18.

II PROJECT TARGET SCHEDULE AND STAFFING

- Authorization for the 45 interviews of phase two was received on February 15, 1983. This, along with the late revision of the questionnaire (February 18), means that the target schedule (Appendix D) may be slightly delayed.

- Two senior consultants are assigned to the study, S.S. Tyler and G. Kemp (the project manager). Research assistant staff includes Terye Galvan and Jan McDaniel.

- User interviews will be with database administrators or EDP managers, i.e., those persons deemed sufficiently knowledgeable to provide accurate data. All user sites will be screened to ensure that a database is in use prior to interview, and that the target equipment (DEC VAX, IBM 4331, etc.) is, in fact, the current equipment installed.

III VENDOR TEST INTERVIEWS

- Vendors do not appear reticent to talk about their experiences and views on back-end processors. Test interviews with STC, Tymshare, and Datafusion produced useful information (even though in INPUT's view the opinions provided are not always in tune with the reality of the market).

- Where possible INPUT will set up face-to-face interviews with each vendor listed in Appendix C. Otherwise, a telephone interview of at least two hours will be carried out.

A. STC

- STC's perception of the back-end processor market is colored by the failure of their VSS product, a mammoth database processor driven by two Magnusson 80/4 processors (.7 MIP each) capable of addressing 20-40 gigabytes.

- The product was aimed at applications with very high utilization of disk storage, essentially a disk-based replacement of the IBM Tape Library.

- The aim, of course, was to sell more STC drives as well as the incremental added value of the BEP. The product was a failure, not least because the average monthly leasing cost was $18,000 to $20,000!

- As a result of this experience, STC believes there is no market for a BEP, and there appears to be significant in-house resistance to helping someone else succeed by becoming an OEM.

- Nevertheless, STC is still intrigued by Britton Lee and particularly Britton Lee's IBM PC shared database system, now being shipped to beta test sites.

B. DATAFUSION

- Datafusion has a series of associative cross-point processors with interesting characteristics competitive with the Servio Logic DBC.

- As a result, a more detailed interview will be done in phase two and the results will be included in the final report.

- Products range from $39,000 to $119,000 annually, but miniaturization is underway to bring entry level down to $5,000.

C. TYMSHARE

- Tymshare has taken a look at interfacing their data management system (Magnum) with Britton Lee's products (mainly IDM 500) and has not found adequate incentive to do so. Magnum is PDP 10 based.

- They believe it is mandatory for a BEP to have sophisticated end-user interfaces to allow productivity improvements (by nonusers accessing the database). Britton Lee did not have any such product at the time.

- Tymshare thinks an alternative way to improve the acceptance of the system could be to interface it with an emerging standard Query language, such as IBM's SQL, which is available under DOS/VSE, has been announced for VMS, and is in testing for MVS.

IV MARKET PREVIEW

- From the initial information gathered, it appears that the BEP market has reached take-off point:

  - Market education has been achieved by Britton Lee, Intel, and others through involvement with leading-edge companies (TRW, Bell Labs, Boeing) and leading-edge universities (particularly Berkeley and Wisconsin).

  - The 20 or so OEMs that have been selling products for the last two years have also softened up the market.

  - Direct sales forces are being established by the present group of manufacturers to accelerate sales penetration.

- Despite all this effort, the market has not been endorsed by a major equipment manufacturer (although this could be imminent, e.g., DEC service support for Britton Lee).

- Phase two analysis of user views will enable us to establish user receptivity at the present time and in the next two years.

- Two dominant characteristics of the marketplace are that it is small and incestuous: everyone who is anyone in the product area (manufacturers, software houses, OEMs) knows everyone else. Any new development is rapidly communicated around this group, and it would be very surprising if Servio Logic remained unknown for very long.

- This is an advantage (once launched, the Servio product will become rapidly known) and a disadvantage (any shortcoming will also become rapidly known).

APPENDIX A

CONFIDENTIAL

INPUT QUESTIONNAIRE

CATALOG. NO Z J R 1
SIC. CODE
SIZE CODE
AREA CODE
STUDY CODE
DATE
MM DD YY

STUDY TITLE:
TYPE OF INTERVIEW: ☐ VENDOR ☐ USER ☐ TELEPHONE ☐ ON-SITE ☐ MAIL

INTERVIEWER:

COMPANY:

CO. TYPE:

ADDRESS:

SALES:

EMPL:

INDUSTRY ☐

☐ DISCRETE MANUFACTURING
☐ PROCESS MANUFACTURING
☐ TRANSPORTATION
☐ MEDICAL
☐ SERVICES
☐ UTILITIES
☐ RETAIL
☐ BANKING
☐ WHOLESALE
☐ OTHER
☐ INSURANCE
☐ GOVERNMENT- FEDERAL
☐ GOVERNMENT-STATE & LOCAL
☐ EDUCATION

INTERVIEWS

NAME	TITLE	TELEPHONE NO.

SUMMARY

REFERENCES

CATALOG NO. ZJR1☐☐☐

INSTALLATION ANALYSIS

	INSTALLED	ON ORDER (Installation)	PLANNED (Date)
A. Hardware			
System Vendor			
Model			
Memory (MB)			
No. Disk			
Disk Model			
Total Storage (MB)			
No Terminals			
– Vendor 1			
– Vendor 2			
– Vendor 3			
Backend Processing			
B. Software/File Handling			
Operating System			
DBMS			
Principal Application			
Flat File			
C. Network			
Local Area Network			
Host/Host			
Workstations/Host			
Personal Computer/Host			

USER QUESTIONNAIRE

Introduction

- INPUT is a market research firm retained by a new company to evaluate the markets receptivity for a new product. The purpose of this visit is to obtain your views on the need for, and desirable functionality of, a back end processor. Are you familiar with the term? Y/N (If no, read definition/narrative.)

Definition/Narrative

- The evolution of data processing systems has created a need for specialization of the various component parts of the information system. One example is the front end processor, (FEP) the role of which is to off-load from the central processor (or host) terminal handling, protocol handling, routing, transaction assembly and network management, so that the host can properly execute its true role. Without the FEP the software overhead resident in the host would require unnecessarily large amounts of memory.

  The same applies to file storage management. Programming an efficient, high performance data base management system is beyond the capabilities and resources of most users, so off-the-shelf software packages such as TOTAL, IMS, IDMS, ADABAS etc. have become very popular. The host overhead they require is enormous, however, and beyond the capabilities of medium/smaller systems. Even the larger systems are being burdened with software functions that do not belong in the host.

  The back end processor houses data base management logic (software) and the storage device handling logic (controller) allowing the host to concentrate once again on its true role.

DATA BASE COMPUTER QUESTIONNAIRE

We would like to begin by examining your current or intended use of data base management systems.

1. What percent of your applications require the use of a DBMS? ______%

   a) Which of your applications are best suited? ____________________

   ____

   ____

   b) Which are least suited? ____________________

   ____

   ____

2. What DBMS system, if any, are you currently using? ____________________

   ____

   ____

   a) Percent of applications using DMBS: ______%

   b) Percent of processing time used in accessing DBMS: ______%

   c) Cost to convert from former mode of operation (hardware, software, personnel?) ____________________

   ____

3. What is the current size of your on-line data base? ____________________

   ____

   ____

   a) Bytes of on-line storage: ____________________

   b) Percent of total storage that is on-line: ______%

4. How are you currently operating your DBMS? (Dedicated system, multiple systems.) ______________________________

____

____

5. Do you estimate your use of DBMS will change in the next few years?

____

a) 1982 _____% of increase/decrease (circle)

b) 1983 _____% of increase/decrease (circle)

c) 1984 _____% of increase/decrease (circle)

6. How do you evaluate your current DBMS?

a) Strong points? ______________________________

____

____

b) Weak points? ______________________________

____

____

c) Reliability? ______________________________

____

____

d) What do you need that your DBMS doesn't offer? ______________

____

____

7. There has been a great deal of discussion concerning different data models. What is your assessment of the advantages and disadvantages of:

a) Hierarchical structures ______

b) Network structure ______

c) Relational structures ______

d) Other (specify) ______

e) What percent of your applications can be satisfied by each?

f) Receptivity to new model. ______

8. Our client has proposed developing a Data Base Computer based on set theoretic logic. All other DB models (relational, network hierarchical etc.) are a subset of set theoretic. Many potential benefits are claimed for such a system. How important do you consider these benefits?

	Now		In Next Five Years	
	Mandatory	Important Option	Mandatory	Important Option
Ad hoc, complex queries by non DP users	______	______	______	______
Enhancing the life of current hardware	______	______	______	______
Reduces DB administration complexity	______	______	______	______
Off-load mainframe computer	______	______	______	______
Low mainframe overhead	______	______	______	______
Ability to process more Data Base applications simultaneously	______	______	______	______
Improved performance	______	______	______	______
Local Data Base sharing by multiple hosts	______	______	______	______
Local Data Base sharing by mixed hosts	______	______	______	______
Distributed Data Bases	______	______	______	______
Text files treated same as data file	______	______	______	______
Ability to change mainframes without altering file structure	______	______	______	______
System expansion without CPU upgrade	______	______	______	______
Enhanced data security	______	______	______	______

9. Would these benefits prompt you to convert from your current systems? (Dialogue: explore the real need, the thinking behind the judgement and the decision process.) ______________________________

____

____

10. If not which benefits are missing? ____________________

____

____

11. Assuming you decided to purchase the product, would you need conversion assistance?

    a) Software tools? (specify) ____________________

    ____

    b) Implementation assistance? ____________________

    ____

    c) What would you expect the conversion to cost? ____________________

    ____

    d) What part of the cost would you expect to pay? ____________________

    ____

12. What would be the most important savings you would expect? (Rank in order of importance)

		Rank
a)	Storage hardware	______
b)	Optimized storage utilization	______
c)	Reduced need for specialized DBMS training	______
d)	Responsiveness to ad hoc queries	______
e)	Other (specify) ____________	______

13. What would a system, such as we have described, be worth to you?

    a) $000/s: ____________________

    b) Main justification in your mind: ____________________

14. Would a Data Base Computer with the indicated performance characteristics help you to implement new applications?

    a) What kind? ______________________________

    ____

    b) If no, why not? ______________________________

    ____

    ____

15. Would you be reluctant to deal with a new vendor (i.e., one who is not known in the industry at present)? ______________________________

    ____

    ____

    a) Would you prefer to purchase the product from a known vendor (e.g., CDC, Memorex, DEC?) ______________________________

    ____

    b) Would you prefer to purchase the product from a software vendor who could install it in your installation? ______________________________

    ____

16. Would you prefer the product to offer a query language or would high order language interfaces be sufficient?

    a) Query language required? ______________________________

    ____

    b) High order language interfaces desired? ______________________________

    ____

17. How would you characterize your overall reaction to the DBC?

____________ Enthusiastic

____________ Interesting

____________ Skeptical

____________ Confusing

____________ Who needs it

18. What do you think will be its strengths in the marketplace? ____________

19. What will be the primary thing inhibiting its acceptance? ____________

20. Any other comments. ____________

APPENDIX B

CONFIDENTIAL

INPUT QUESTIONNAIRE

CATALOG. NO Z J R 2
SIC. CODE
SIZE CODE
AREA CODE
STUDY CODE
DATE
MM DD YY

STUDY TITLE:
TYPE OF INTERVIEW: ☐ VENDOR ☐ USER ☐ TELEPHONE ☐ ON-SITE ☐ MAIL

INTERVIEWER: ____________________

COMPANY: ____________________ CO. TYPE: ____________________

ADDRESS: ____________________ SALES: ____________________

____________________ # EMPL: ____________________

____

____

INDUSTRY ☐

☐ DISCRETE MANUFACTURING
☐ PROCESS MANUFACTURING
☐ TRANSPORTATION
☐ MEDICAL
☐ SERVICES
☐ UTILITIES
☐ RETAIL
☐ BANKING
☐ WHOLESALE
☐ OTHER
☐ INSURANCE
☐ GOVERNMENT- FEDERAL
☐ GOVERNMENT-STATE & LOCAL
☐ EDUCATION

INTERVIEWS

NAME	TITLE	TELEPHONE NO.

SUMMARY

____

____

____

____

REFERENCES

____

____

____

CATALOG NO. Z J R 2

INSTALLATION ANALYSIS

MAIN EQUIPMENT: Purchase ______ Leased ______	INSTALLED	ON ORDER (Installation)	PLANNED (Date)
A. Hardware			
System Vendor			
Model			
Memory (MB)			
No. Disk			
Disk Model			
Total Storage (MB)			
No Terminals			
- Vendor 1			
- Vendor 2			
- Vendor 3			
Backend Processing			
B. Software/File Handling			
Operating System			
DBMS			
Transaction Processor (e.g., CICS)			
Principal Application			
Timesharing Usage	$ /annum		$ /annum
C. Network			
Local Area Network			
Host/Host			
Workstation/Host			
Personal Computer/Host			

USER QUESTIONNAIRE

Introduction

- INPUT is a market research firm retained by a new company to evaluate the markets receptivity for a new product. The purpose of this visit is to obtain your views on the need for, and desirable functionality of, a back end processor. Are you familiar with the term? Y/N (If no, read definition/narrative.) If yes, how have you heard about it:

  - Trade Shows ________
  - Press Articles ________
  - Advertising ________
  - Sales Call ________
  - Other (specify) ________
  - Vendors You Have Heard Of ________

Definition/Narrative

- The evolution of data processing systems has created a need for specialization of the various component parts of information system. One example is the front end processor, (FEP) the role of which is to off-load from the central processor (or host) terminal handling, protocol handling, routing, transaction assembly and network management, so that the host can properly execute its true role. Without the FEP the software overhead resident in the host would require unnecessarily large amounts of memory.

  The same applies to file storage management. Programming an effecient, high performance data base management system is beyond the capabilities and resources of most users, so off-the-shelf software packages such as TOTAL, IMS, IDMS, ADABAS etc. have become very popular. The host overhead they require is enormous, however, and beyond the capabilities of medium/smaller systems. Even the larger systems are being burdened with software functions that do not belong in the host.

  The back end processor houses data base management logic (software) and the storage device handling logic (controller) allowing the host to concentrate once again on its true role.

CATALOG NO. Z J R 2 ☐ ☐ ☐

DATA BASE COMPUTER QUESTIONNAIRE

We would like to begin by examining your current or intended use of data base management systems.

1. What percent of your applications require the use of a DBMS? ______%

   a) Which of your applications are best suited? ______________________

   ____

   ____

   b) Which are least suited? ______________________

   ____

   ____

2. What DBMS system, if any, are you currently using? ______________

   ____

   ____

   a) Percent of applications using DMBS: ______%

   b) Percent of processing time used in accessing DBMS: ______%

   c) Cost to convert from former mode of operation (hardware, software, personnel?) ______________________

3. What are you using your system for?

   - On Line Applications ______________________
   - Batch Applications ______________________
   - Development Work ______________________
   - Other (e.g.,ad hoc queries)______________________

4. How are you currently operating your DBMS? (Dedicated system, multiple systems.) ____________________

____

____

5. Do you estimate your use of DBMS will change in the next few years?

____

a) 1982 _____% of increase/decrease (circle)

b) 1983 _____% of increase/decrease (circle)

c) 1984 _____% of increase/decrease (circle)

6. How do you rate on a scale of 1-10 your current DBMS?

________ On-line Performance

________ Maintainability

________ Update Features

________ Recovery

________ Security

________ Transportability (from one host to another)

________ Transparency

________ Upwards Compatability

________ Ease of Applications Development

________ Installation and Initial Use

________ Vendor Support

________ Amount of Specialized Personnel to Support

________ Other (please specify) ____________________

7. There has been a great deal of discussion concerning different data models. What is your assessment of the advantages and disadvantages of:

a) Hierarchical structures ____________________

b) Network structure (CODASYL) ____________________

c) Relational structures ____________________

d) Other (specify) ____________________

e) What percent of your applications can be satisfied by each?

f) Receptivity to new model. (e.g., set theoretic): ____________________

8. Our client has proposed developing a Data Base Computer based on set theoretic logic. All other DB models (relational, network, (CODASYL), hierarchical etc.) are a subset of set theoretic. Many potential benefits are claimed for such a system. How important do you consider these benefits?

	Now		In Next Five Years	
	Mandatory	Important Option	Mandatory	Important Option
Ad hoc, complex queries by non DP users				
Enhancing the life of current hardware				
Enhance life of current software investment				
Reduces DB administration complexity				
Off-load mainframe computer				
Ability to process more Data Base applications simultaneously				
Improved performance				
Local Data Base sharing by multiple hosts				
Local Data Base sharing by mixed hosts				
User transparent distributed Data Bases				
Text files treated same as data file				
Ability to change mainframes without altering file structure				
System expansion without CPU upgrade				

9. Would these benefits prompt you to convert from your current systems? (Dialogue: explore the real need, the thinking behind the judgement and the decision process.) ____________________

____

____

10. If not which benefits are missing? ______________________________

11. Assuming you decided to purchase the product, would you need conversion assistance?

    a) Software tools? (specify) ______________________________

    b) Implementation assistance? ______________________________

    c) What would you expect the conversion to cost? ________________

    d) At what point does conversion become prohibitive? (time, $) ________

12. What would be the most important savings you would expect? (Rank in order of importance)

	Rank
a) Optimized utilization of storage hardware	_____
b) Reduce application development time	_____
c) Reduce software maintenance time	_____
d) Reduced need for specialized DBMS training	_____
e) Responsiveness to more EDP user ad hoc qualities	_____
f) Other (specify) ________________	_____

13. What would a system, such as we have described, be worth to you?

    a) $000/s: ______________________________

    b) Main justification in your mind: ________________________

14. Would a Data Base Computer with the indicated performance characteristics help you to implement new applications?

a) What kind? ______________________________

____

b) If no, why not? ______________________________

____

15. Would you be reluctant to deal with a new vendor (i.e., one who is not known in the industry at present)? ______________________________

____

____

a) Would you prefer to purchase the product from a known hardware vendor (e.g., CEC. Memorex, DEC?) ______________________________

____

b) Would you prefer to purchase the product from a known software vendor who could install it in your installation? ______________________________

____

c) Would you accept product service from a third-party maintenance vendor?

____

____

16. Would you prefer the product to offer a query language or would high order language interfaces be sufficient?

a) Query language required? ______________________________

____

b) High order language interfaces desired? ______________________________

____

c) How strongly do you feel about a CODASYL interface? ______________________________

____

17. How would you characterize your overall reaction to the DBC?

__________ Enthusiastic

__________ Interesting

__________ Skeptical

__________ Confusing

__________ Who needs it

18. What do you think will be its strengths in the marketplace? __________

19. What will be the primary thing inhibiting its acceptance? __________

20. Any other comments. __________

APPENDIX C

INTERVIEW LIST - PROJECT XJR2

COMPANY	EQUIPMENT	USER INTERVIEWS	VENDOR INTERVIEWS OEM	COMPETITION
Burroughs	1800	1	-	-
IBM	Systems 38	2	-	-
	4331	3	-	-
DEC	PDP 11/70-1	1	1	-
	VAX	10	-	-
Prime	550-750	4	1	-
Data General	MV 6000/8000	3	1	-
H-P	3000/44/64	2	-	-
Memorex		-	1	-
Wang		2	1	-
PRC		-	1	-
CDC		-	1	-
Britton Lee		3	-	1
Intel		-	-	1
Datafusion		-	-	1
TOTAL		35	7	3

APPENDIX D

1983 QUARTERLY SCHEDULING PLAN (Q1)

PROJECT: ZJR 2

DATE: 2-11-83

PROJECT LEADER: G. KEMP

PHASE TWO

5 USER
7 OEM
.COMP.

ACTIVITY / PROJECT	NAME	MAN DAYS	EFFICIENCY	ESMD	CORP. WEEK END	JAN 1 1/7	2 1/14	3 1/21	4 1/28	FEB 5 2/4	6 2/11	7 2/18	8(4) 2/25	MARCH 9 3/4	10 3/11	11 3/18	12 3/25	13 4/1
70: PROJECT AUTHORIZATION/ SPECIFICATION	GK	1/2	1	1/2								14 ▼						
71: Q DESIGN	GK	Accomplished										14 ▼						
71: Q APPROVAL/ REVIEW MEETING	JR/GK	Accomplished										14 ▼						
74 : INTERVIEWS ~~PHONE ( ) NO~~	JR, AJ DN, GK	14	1	14										2 ▼				
75: DATATAB AND ANALYSIS	RA	2	1/2	1										4 ▼				
76A: WRITING	GK	5	1	5											11 ▼			
76B: ABSTRACT	Not Applicable																	
77: QC	GK	1/2	1	1/2												15 ▼		
REPORT PROD. AND SHIPPING		Included															25 ▼	
78: PRESENTATION	GK		1														25 ▼	
70: "THANK YOU" MAILED TO USERS	RA	1/2	1/2	1/4													25 ▼	
PLAN				22 1/4														
ACTUAL																		

& M.D.

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姓名：
Name

职务：
Post

单位：
Unit

No:
Date:

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装得快 文具

APRIL2013